

Appl. No. 10/038,170  
Atty. Docket No. 6768CD  
Amdt. dated February 17, 2004  
Reply to Office Action of November 17, 2003  
Customer No. 27752

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### Listing of Claims:

Claims 1-9 (canceled)

10. (currently amended) An alkylaryl composition suitable as a source for making alkylarylsulfonate surfactants, wherein said composition comprises at least two isomers of an alkylaryl of the formula:



wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

R' is selected from H and C<sub>1</sub> to C<sub>3</sub> alkyl;

R'' is selected from H and C<sub>1</sub> to C<sub>3</sub> alkyl;

both R' and R'' are nonterminally attached to L and at least one of R' and R'' is C<sub>1</sub> to C<sub>3</sub> alkyl;

R''' is selected from H and C<sub>1</sub> to C<sub>3</sub> alkyl; and

A is [[aryl]] an aromatic hydrocarbon selected from the group consisting of benzene, toluene, xylene, naphthalene, and mixtures thereof;

wherein:

said alkylaryl composition comprises two or more isomers with respect to positions of attachment of R', R'' and A to L;

in at least about 60% of said alkylaryl composition, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof; and

Appl. No. 10/038,170  
 Atty. Docket No. 6768CD  
 Amdt. dated February 17, 2004  
 Reply to Office Action of November 17, 2003  
 Customer No. 27752

wherein further said alkylaryl composition has a ratio of nonquaternary to quaternary carbon atoms in L of at least about 10:1 by weight, when said quaternary carbon atoms are present.

11. (canceled)

12. (canceled)

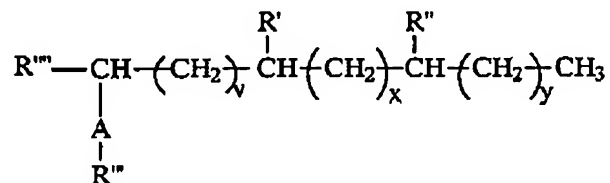
13. (currently amended) The ~~alkylaryl~~ composition according to Claim 2 wherein A is benzene.

14. (currently amended) The ~~alkylaryl~~ composition according to Claim 2 wherein A is toluene.

15. (currently amended) The ~~alkylaryl~~ composition according to Claim 1 wherein one of R' and R'' is methyl or ethyl.

16. (currently amended) The ~~alkylaryl~~ composition according to Claim 1 wherein one of R' and R'' is methyl.

17. (currently amended) An ~~alkylaryl~~ composition suitable as a source for making alkylarylsulfonate surfactants, wherein said composition comprises at least two isomers, counted exclusive of ortho-, meta-, para-, and stereoisomers, of an ~~alkylaryl~~ of the formula:



wherein A is [[aryl]] an aromatic hydrocarbon selected from the group consisting of benzene, toluene, xylene, naphthalene, and mixtures thereof; R''' is selected from H and C<sub>1</sub> to C<sub>3</sub> alkyl; R' is selected from hydrogen and C<sub>1</sub> to C<sub>3</sub> alkyl; R'' is selected from hydrogen and C<sub>1</sub> to C<sub>3</sub> alkyl;

Appl. No. 10/038,170  
 Atty. Docket No. 6768CD  
 Amdt. dated February 17, 2004  
 Reply to Office Action of November 17, 2003  
 Customer No. 27752

and R<sup>'''</sup> is selected from hydrogen and C<sub>1</sub> to C<sub>4</sub> alkyl; v is an integer from 0 to 10; x is an integer from 0 to 10; y is an integer from 0 to 10;

wherein:

the total number of carbon atoms attached to A is less than about 20;

said ~~alkylaryl~~ composition comprises two or more isomers with respect to positions of attachment of R', R'' and A to the moiety

R<sup>'''</sup>-C(-)H(CH<sub>2</sub>)<sub>v</sub>C(-)H(CH<sub>2</sub>)<sub>x</sub>C(-)H(CH<sub>2</sub>)<sub>y</sub>-CH<sub>3</sub> of this formula;

at least one of R' and R'' is C<sub>1</sub> to C<sub>3</sub> alkyl; when R<sup>'''</sup> is C<sub>1</sub>, the sum of v + x + y is at least 1; and when R<sup>'''</sup> is H, the sum of v + x + y is at least 2; and

in at least about 60% of said alkylaryl composition, A is attached to the moiety

R<sup>'''</sup>-C(-)H(CH<sub>2</sub>)<sub>v</sub>C(-)H(CH<sub>2</sub>)<sub>x</sub>C(-)H(CH<sub>2</sub>)<sub>y</sub>-CH<sub>3</sub> in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof;

wherein further said ~~alkylaryl~~ composition has a ratio of nonquaternary to quaternary carbon atoms in the moiety

R<sup>'''</sup>-C(-)H(CH<sub>2</sub>)<sub>v</sub>C(-)H(CH<sub>2</sub>)<sub>x</sub>C(-)H(CH<sub>2</sub>)<sub>y</sub>-CH<sub>3</sub>

of at least about 10:1 by weight, when said quaternary carbon atoms are present.

18. (canceled)

19. (canceled)

20. (currently amended) The ~~alkylaryl~~ composition according to Claim 8 wherein A is benzene.

21. (currently amended) The ~~alkylaryl~~ composition according to Claim 8 wherein A is toluene.

22. (currently amended) The ~~alkylaryl~~ composition according to Claim 7 wherein one of R' and R'' is methyl or ethyl.

23. (currently amended) The ~~alkylaryl~~ composition according to Claim 7 wherein one of R' and R'' is methyl.

Appl. No. 10/038,170  
 Atty. Docket No. 6768CD  
 Amdt. dated February 17, 2004  
 Reply to Office Action of November 17, 2003  
 Customer No. 27752

24. (currently amended) The ~~alkylaryl~~ composition according to Claim 7 wherein at least about 80% of said ~~alkylaryl~~ composition, A is attached to  $R'''-CH(CH_2)_yCH(CH_2)_xCH(CH_2)_y-CH_3$  in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof.

25. (currently amended) The ~~alkylaryl~~ composition according to Claim 7 wherein  $R'''$  is hydrogen, methyl or ethyl.

26. (currently amended) An ~~alkylaryl~~ composition suitable as a source for making alkylarylsulfonate surfactants, wherein said composition comprises:

a) from about 0.01% to about 99.99% by weight of an ~~alkylaryl~~ composition comprising at least two isomers of an ~~alkylaryl~~ of the formula:



wherein:

L is an acyclic aliphatic hydrocarbyl of from 6 to 18 carbon atoms in total;

$R'$  is selected from H and  $C_1$  to  $C_3$  alkyl;

$R''$  is selected from H and  $C_1$  to  $C_3$  alkyl;

both  $R'$  and  $R''$  are nonterminally attached to L and at least one of  $R'$  and  $R''$  is  $C_1$  to  $C_3$  alkyl;

$R'''$  is selected from H and  $C_1$  to  $C_3$  alkyl; and

A is [[aryl]] an aromatic hydrocarbon selected from the group consisting of benzene, toluene, xylene, naphthalene, and mixtures thereof;

wherein:

said ~~alkylaryl~~ composition comprises two or more isomers with respect to positions of attachment of  $R'$ ,  $R''$  and A to L;

in at least about 60% of said ~~alkylaryl~~ composition, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof; and

Appl. No. 10/038,170  
Atty. Docket No. 6768CD  
Amdt. dated February 17, 2004  
Reply to Office Action of November 17, 2003  
Customer No. 27752

wherein further said ~~alkylaryl~~ composition has a ratio of nonquaternary to quaternary carbon atoms in L of at least about 10:1 by weight, when said quaternary carbon atoms are present; and

b) from about 0.01% to about 99.99% by weight of at least one isomer of the linear analog of said ~~alkylaryl~~ composition of (a).

27. (currently amended) The ~~alkylaryl~~ composition according to Claim 15 wherein at least about 80% of said ~~alkylaryl~~ composition, A is attached to L in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof.

28. (canceled)

29. (canceled)

30. (currently amended) The ~~alkylaryl~~ composition according to Claim 17 wherein A is benzene.

31. (currently amended) The ~~alkylaryl~~ composition according to Claim 17 wherein A is toluene.

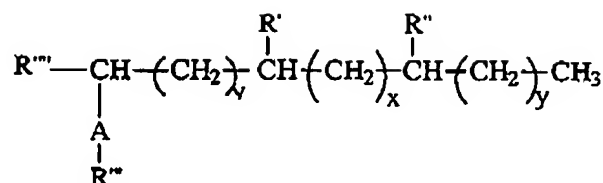
32. (currently amended) The ~~alkylaryl~~ composition according to Claim 15 wherein one of R' and R'' is methyl or ethyl.

33. (currently amended) The ~~alkylaryl~~ composition according to Claim 20 wherein one of R' and R'' is methyl.

34. (currently amended) An ~~alkylaryl~~ composition suitable as a source for making alkylarylsulfonate surfactants, wherein said composition comprises:

a) from about 0.01% to about 99.99% by weight of an ~~alkylaryl~~ composition comprising at least two isomers, counted exclusive of ortho-, meta-, para- and stereoisomers, of an alkylaryl of the formula:

Appl. No. 10/038,170  
 Atty. Docket No. 6768CD  
 Amdt. dated February 17, 2004  
 Reply to Office Action of November 17, 2003  
 Customer No. 27752



wherein A is [[aryl]] an aromatic hydrocarbon selected from the group consisting of benzene, toluene, xylene, naphthalene, and mixtures thereof; R''' is selected from H and C<sub>1</sub> to C<sub>3</sub> alkyl; R' is selected from hydrogen and C<sub>1</sub> to C<sub>3</sub> alkyl; R'' is selected from hydrogen and C<sub>1</sub> to C<sub>3</sub> alkyl; and R'''' is selected from hydrogen and C<sub>1</sub> to C<sub>4</sub> alkyl; v is an integer from 0 to 10; x is an integer from 0 to 10; y is an integer from 0 to 10;

wherein:

the total number of carbon atoms attached to A is less than about 20;

said ~~alkylaryl~~ composition comprises two or more isomers with respect to positions of attachment of R', R'' and A to the moiety

R'''-C(-)H(CH<sub>2</sub>)<sub>v</sub>C(-)H(CH<sub>2</sub>)<sub>x</sub>C(-)H(CH<sub>2</sub>)<sub>y</sub>-CH<sub>3</sub> of this formula;

at least one of R' and R'' is C<sub>1</sub> to C<sub>3</sub> alkyl; when R''' is C<sub>1</sub>, the sum of v + x + y is at least 1; and when R''' is H, the sum of v + x + y is at least 2; and

in at least about 60% of said ~~alkylaryl~~ composition, A is attached to the moiety

R'''-C(-)H(CH<sub>2</sub>)<sub>v</sub>C(-)H(CH<sub>2</sub>)<sub>x</sub>C(-)H(CH<sub>2</sub>)<sub>y</sub>-CH<sub>3</sub> in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof;

wherein further said ~~alkylaryl~~ composition has a ratio of nonquaternary to quaternary carbon atoms in the moiety

R'''-C(-)H(CH<sub>2</sub>)<sub>v</sub>C(-)H(CH<sub>2</sub>)<sub>x</sub>C(-)H(CH<sub>2</sub>)<sub>y</sub>-CH<sub>3</sub>

of at least about 10:1 by weight, when said quaternary carbon atoms are present; and

b) from about 0.01% to about 99.99% by weight of at least one isomer of the linear analog of said ~~alkylaryl~~ composition of (a).

35. (canceled)

36. (canceled)

Appl. No. 10/038,170  
Atty. Docket No. 6768CD  
Amdt. dated February 17, 2004  
Reply to Office Action of November 17, 2003  
Customer No. 27752

37. (currently amended) The ~~alkylaryl~~ composition according to Claim 23 wherein A is benzene.
38. (currently amended) The ~~alkylaryl~~ composition according to Claim 23 wherein A is toluene.
39. (currently amended) The ~~alkylaryl~~ composition according to Claim 22 wherein one of R' and R'' is methyl or ethyl.
40. (currently amended) The ~~alkylaryl~~ composition according to Claim 26 wherein one of R' and R'' is methyl.
41. (currently amended) The ~~alkylaryl~~ composition according to Claims 22 wherein at least about 80% of said ~~alkylaryl~~ composition, A is attached to R'''-CH(CH<sub>2</sub>)<sub>y</sub>CH(CH<sub>2</sub>)<sub>x</sub>CH(CH<sub>2</sub>)<sub>y</sub>-CH<sub>3</sub> in the position which is selected from positions alpha- and beta- to either of the two terminal carbon atoms thereof.
42. (currently amended) The ~~alkylaryl~~ composition according to Claim 22 wherein R''' is hydrogen, methyl or ethyl.